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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/633,764 | 08/04/2003 | Yihua Chang | 4022-000009 | 6497 |

27572 7590 08/22/2006

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| EXAMINER |
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MIGGINS, MICHAEL C

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| ART UNIT | PAPER NUMBER |
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1772

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|---------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/633,764 | Applicant(s) CHANG ET AL. | |
| | Examiner Michael C. Miggins | Art Unit 1772 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-28 and 30-54 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1, 4-28, 30-54 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

REJECTIONS WITHDRAWN

There are no rejections withdrawn.

REJECTIONS REPEATED

All of the rejections set forth in the non-final rejection of 1/12/06 are repeated for the reasons of record.

NEW REJECTIONS

There are no new rejections.

ANSWERS TO APPLICANT'S ARGUMENTS

Applicant's arguments filed 6/12/06 have been carefully considered but are deemed unpersuasive.

Applicant has argued that Ronden discloses that the thermoplastic polymer comprises between about 30 and 75, or 10 to 80, percent by weight of the composite material and that Hoetjer discloses a thermoset polymer that is present in the composition in an amount of 6 to 10 percent by weight. Applicant alleges that there is no suggestion or motivation to combine the teachings of Hoetjer with the teachings of Ronden with these vastly different amounts (applicant has provided the same argument for the amount of organic filler). However, Ronden was not relied upon for any teaching for the concentration of polymer in the mixture. Ronden was relied upon for its teaching

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of heterogeneous waste material. Furthermore, there is no direct teaching away from using higher concentrations in Hoetjer and thus the combination is proper.

In response to applicant's argument that the polymer concentration and organic filler is different in Hoetjer when compared to Ronden, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Applicant has alleged that the examiner has ignored incompatible teachings.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in

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the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine Hoetjer and Ronden is found in Ronden where lower costs and conservation of natural resources is provided.

Applicant has argued that Ronden disclose the use of wood waste products and that claim 63 does not use wood waste products. However, non-wood waste products are disclosed in Hoetjer (see rejection above). Furthermore, Hoetjer discloses that waste products can be wood or non-wood (column 1, lines 15-19) which would clearly include the wood based products of Ronden. This clearly suggests that the references are compatible. Applicant has argued that the wood fibers of Ronden are substantially smaller than those of applicant. However, Lund discloses the claimed diameter of claim 64 (see rejection above).

Applicant has argued that the formaldehyde resins of Hoetjer and Ronden are different and thus incompatible. Hoetjer discloses a urea-formaldehyde which contains melamine (column 2, lines 32-45) and Ronden discloses phenol formaldehyde. However, Ronden was not relied upon for its phenol formaldehyde but for its disclosure of a heterogeneous waste material. Furthermore, there is no direct teaching in Hoetjer that precludes phenol formaldehyde and the references are compatible since both disclose formaldehydes.

It is respectfully submitted that the combined teachings of Hoetjer, Sleeter and Ronden discloses applicant's invention as currently claimed and that sufficient motivation has been provided for the reasons stated above.

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Applicant has argued against the proposed combination of Knokey with Hoetjer since there is a difference between the concentrations of adhesive or binder. However, these arguments are the same are substantially similar to those provided against the combination of Hoetjer and Ronden and the response to those arguments provided apply equally as well to the combination of Hoetjer and Knokey (see the above arguments).

Applicant has argued that the wood waste strand diameter disclosed in Knokey is different from that which is claimed in claims 53, 59, and 64. However, Knokey was not relied upon for its diameter disclosure but rather for its disclosure of heterogeneous waste material. Lund discloses applicant's claimed diameter (see rejection above).

Applicant has argued that Knokey fails to recite the use of melamine and thus, to arrive at applicant's claimed invention, one of ordinary skill in the art would not know if melamine should be added to the thermoset resin and thus Hoetjer and Knokey are incompatible. However, Hoetjer clearly discloses melamine (column 2, lines 32-45).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention

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where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine Hoetjer with Knokey lies in the fact that heterogeneous waste material provides lower costs and conserves natural resources.

It is respectfully submitted that the combined teachings of Hoetjer, Sleeter and Knokey discloses applicant's invention as currently claimed and that sufficient motivation has been provided for the reasons stated above.

Applicant has argued that Hoetjer and Sleeter are incompatible because Sleeter seeks to reduce the use of formaldehydes. However, Sleeter clearly states that a first co-adhesive system has an amount of conventional adhesive that is used to quickly form the fibrous mat into a bonded board or panel (column 5, lines 40-45). This disclosure clearly indicates that formaldehydes are used. Applicant has further argued that Sleeter uses a different catalyst than Hoetjer. However, Sleeter was not relied on for its disclosure of a catalyst, Sleeter was relied upon for its disclosure of a petroleum distillate as a release agent.

In response to applicant's argument that Hoetjer and Sleeter are incompatible, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the

test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Applicant has argued that disclosing a precise density is not indicative of a composition having a substantially uniform density, applicant alleges that Hoetjer could have only taken one measurement thus obtaining a precise value. However, Hoetjer specifically states that *the chipboard* (thus clearly indicating the whole chipboard and not just a random spot on the chipboard) thus obtained was determined to have the following properties: density 680 kg/m³ (column 4, lines 44-50).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Miggins whose telephone number is 571-272-1494. The examiner can normally be reached on 1:00-10:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael C. Miggins
Primary Examiner
Art Unit 1772



MCM
August 21, 2006